INDEX TO AUTHORS

ANDERSON, KATHERINE. See GOODPASTURE, DOUGLAS, and ANDERSON, 891

CHAMBERS, LESLIE A. See HENLE, HENLE, and CHAMBERS, 335

CHILES, JAMES A., JR., and SEVERINGHAUS, AURA E. Hormone studies with the ultracentrifuge. I. An improved air-driven vacuum ultracentrifuge suitable for concentration work in biological experiments, 1

COGGESHALL, LOWELL T., and EATON, MONROE D. The quantitative relationship between immune serum and infective dose of parasites as demonstrated by the protection test in monkey malaria, 29

— and KUMM, HENRY W. Effect of repeated superinfection upon the potency of immune serum of monkeys harboring chronic infections of *Plasmodium knowlesi*, 17

DARBY, WILLIAM J. See LANGSTON, DARBY, SHUKERS, and DAY, 923

DAY, PAUL L. See LANGSTON, DARBY, SHUKERS, and DAY, 923

DI SOMMA, A. A. See LANDSTEINER and DI SOMMA, 505

DOUGLAS, BEVERLY. See GOODPASTURE, DOUGLAS, and ANDERSON, 891

DRINKER, CECIL K. See SCHULZ, WARREN, and DRINKER, 251

—. See YOFFEY and DRINKER, 629

DRINKER, CECIL K. See YOFFEY, SULLIVAN, and DRINKER, 941

DRURY, D. R. The production by a new method of renal insufficiency and hypertension in the rabbit, 693

DUBOS, R. J. See THOMPSON and DUBOS, 191

EATON, MONROE D. See COGGESHALL and EATON, 29

EISENBERG, HARRY. See THORN, ENGEL, and EISENBERG, 161

ENGEL, LEWIS L. See THORN and ENGEL, 299

—. See THORN, ENGEL, and EISENBERG, 161

FRANCIS, THOMAS, JR., and MAGILL, T. P. An unidentified virus producing acute meningitis and pneumonitis in experimental animals, 147

— and STUART-HARRIS, C. H. Studies on the nasal histology of epidemic influenza virus infection in the ferret. I. The development and repair of the nasal lesion, 789

— and —. Studies on the nasal histology of epidemic influenza virus infection in the ferret. III. Histological and serological observations on ferrets receiving repeated inoculations of epidemic influenza virus, 813

—. See STUART-HARRIS and FRANCIS, 803

FREUND, JULES, and OPIE, EUGENE L. Sensitization and antibody formation with increased resistance to

tuberculous infection induced by heat-killed tubercle bacilli, 273

FRIEDMAN, M., and KATZ, L. N. Renal insufficiency following trypsin injection into the renal arteries, 485

GALLAGHER, FRED W. See WOOLPERT, GALLAGHER, RUBINSTEIN, and HUDSON, 313

GERMAN, WILLIAM J., and TRASK, JAMES D. Cutaneous infectivity in experimental poliomyelitis. Increased susceptibility after neurosurgical procedures, 125

GOEBEL, WALTHER F. Chemoimmunological studies on conjugated carbohydrate-proteins. XII. The immunological properties of an artificial antigen containing cellobiuronic acid, 469

—. The isolation of the blood group A specific substance from commercial peptone, 221

GOODPASTURE, ERNEST W., DOUGLAS, BEVERLY, and ANDERSON, KATHERINE. A study of human skin grafted upon the chorioallantois of chick embryos, 891

GRABAR, PIERRE. See HEIDELBERGER, GRABAR, and TREFFERS, 913

HARFORD, CARL G. See OLITSKY and HARFORD, 173, 761, 779

HEIDELBERGER, MICHAEL, GRABAR, PIERRE, and TREFFERS, HENRY P. Quantitative studies on antibody purification. III. The reaction of dissociated antibody with specific polysaccharide, and the effect of formaldehyde, 913

HENLE, GERTRUDE. See HENLE, HENLE, and CHAMBERS, 335

HENLE, WERNER, HENLE, GERTRUDE, and CHAMBERS, LESLIE A. Studies on the antigenic structure of some mammalian spermatozoa, 335

HODES, H. L., and WEBSTER, LESLIE T. Relation between degree of immunity of mice following vaccination with St. Louis encephalitis virus and the titer of the protective antibodies of the serum, 263

HUDDLESON, I. F. See PENNELL and HUDDLESON, 73, 83

HUDSON, N. PAUL. See WOOLPERT, GALLAGHER, RUBINSTEIN, and HUDSON, 313

JOYNER, AUSTIN L., and SABIN, FLORENCE R. Altered cutaneous conditions in the skin of tuberculous guinea pigs as demonstrated with a vital dye, 325

—. See SABIN and JOYNER, 659, 853

—. See SABIN, JOYNER, and SMITHBURN, 563

KATZ, L. N. See FRIEDMAN and KATZ, 485

KIDD, JOHN G. Immunological reactions with a virus causing papillomas in rabbits. I. Demonstration of a complement fixation reaction: relation of virus-neutralizing and complement-binding antibodies, 703

—. II. Properties of the complement-binding antigen present in extracts of the growths: its relation to the virus, 725

—. III. Antigenicity and pathogenicity of extracts of the growths of wild and domestic species: general discussion, 737

— and ROUS, PEYTON. The carcinogenic effect of a papilloma virus on the tarred skin of rabbits. II. Major factors determining the phenomenon: the manifold effects of tarring, 529

KING, LESTER S. Studies on Eastern equine encephalomyelitis. I. Histopathology of the nervous system in the guinea pig, 677
—. Vital staining of the connective tissues, 63
KOLB, LAWRENCE C. See WINTROBE, MITCHELL, and KOLB, 207
KUMM, HENRY W. See COGGESHALL and KUMM, 17

LANDSTEINER, K., and DI SOMMA, A. A. Studies on the sensitization of animals with simple chemical compounds. V. Sensitization to diazomethane and mustard oil, 505
LANGSTON, WILLIAM C., DARBY, WILLIAM J., SHUKERS, CARROLL F., and DAY, PAUL L. Nutritional cytopenia (vitamin M deficiency) in the monkey, 923
LITTLE, RALPH B. The significance of human double zone beta hemolytic streptococci in the udder of the cow, 905
LUCKÉ, BALDUIN. Carcinoma in the leopard frog: its probable causation by a virus, 457

MAGILL, T. P. See FRANCIS and MAGILL, 147
MCMASTER, PHILIP D., and PARSONS, ROBERT J. The effect of the pulse on the spread of substances through tissues, 377
—. See PARSONS and MCMASTER, 353, 869
MITCHELL, DAVID M. See WINTROBE, MITCHELL, and KOLB, 207

NELSON, JOHN B. The behavior of pox viruses in the respiratory tract. I. The response of mice to the nasal instillation of vaccinia virus, 401
NICHOLSON, T. F., URQUHART, R. W. I., and SELBY, D. L. Renal function as affected by experimental unilateral kidney lesions. I. Nephrosis due to sodium tartrate, 439

OLITSKY, PETER K., and HARFORD, CARL G. Intraperitoneal and intracerebral routes in serum protection tests with the virus of equine encephalomyelitis. I. A comparison of the two routes in protection tests, 173
— and —. II. Mechanism underlying the difference in protective power by the two routes, 761
— and —. III. Comparison of antiviral serum constituents from guinea pigs immunized with active or formolized inactive virus, 779
—. See SABIN and OLITSKY, 39
OPIE, EUGENE L. See FREUND and OPIE, 273

PARSONS, ROBERT J., and MCMASTER, PHILIP D. The effect of the pulse upon the formation and flow of lymph, 353
— and —. Normal and pathological factors influencing the spread of a vital dye in the connective tissue, 869
—. See MCMASTER and PARSONS, 377
PEDERSEN, KAI O. See SEIBERT, PEDERSEN, and TISELIUS, 413
PENNELL, R. B., and HUDDLESON, I. F. Quantitative studies of brucella precipitin systems. I. Precipitation of homologous antisera by brucella endoantigens, 73
— and —. II. The precipitation of heterologous antisera by brucella endoantigens, 83
PICKELS, EDWARD G., and SMADEL, JOSEPH E. Ultracentrifugation

studies on the elementary bodies of vaccine virus. I. General methods and determination of particle size, 583

PICKELS, EDWARD G. See SMADEL, PICKELS, and SHEDLOVSKY, 607

ROUS, PEYTON. See KIDD and ROUS, 529

RUBINSTEIN, LEONA. See WOOLPERT, GALLAGHER, RUBINSTEIN, and HUDSON, 313

SABIN, ALBERT B., and OLITSKY, PETER K. Fate of nasally instilled poliomyelitis virus in normal and convalescent monkeys with special reference to the problem of host to host transmission, 39

SABIN, FLORENCE R. Cellular reactions to tuberculo-proteins compared with the reactions to tuberculo-lipids, 837

— and JOYNER, AUSTIN L. Cellular reactions to defatted tubercle bacilli and their products, 853

— and —. Tubercular allergy without infection, 659

—, —, and SMITHBURN, KENNETH C. Cellular reactions to polysaccharides from tubercle bacilli and from pneumococci, 563

—. See JOYNER and SABIN, 325

—. See SMITHBURN and SABIN, 641

SCHULZ, REUBEN Z., WARREN, MADELEINE F., and DRINKER, CECIL K. The passage of rabbit virulent Type III pneumococci from the respiratory tract of rabbits into the lymphatics and blood, 251

SEIBERT, FLORENCE B., PEDERSEN, KAI O., and TISELIUS, ARNE. Molecular weight, electrochemical and biological properties of tuberculin protein and polysaccharide molecules, 413

SELBY, D. L. See NICHOLSON, URQUHART, and SELBY, 439

SEVERINGHAUS, AURA E. See CHILES and SEVERINGHAUS, 1

SHEDLOVSKY, THEODORE. See SMADEL, PICKELS, and SHEDLOVSKY, 607

SHUKERS, CARROLL F. See LANGSTON, DARBY, SHUKERS, and DAY, 923

SMADEL, JOSEPH E., PICKELS, EDWARD G., and SHEDLOVSKY, THEODORE. Ultracentrifugation studies on the elementary bodies of vaccine virus. II. The influence of sucrose, glycerol, and urea solutions on the physical nature of vaccine virus, 607

—. See PICKELS and SMADEL, 583

SMITHBURN, KENNETH C., and SABIN, FLORENCE R. Reactions of normal and tuberculous animals to tuberculo-protein and tuberculo-phosphatide, 641

—. See SABIN, JOYNER, and SMITHBURN, 563

STUART-HARRIS, C. H., and FRANCIS, THOMAS, JR. Studies on the nasal histology of epidemic influenza virus infection in the ferret. II. The resistance of regenerating respiratory epithelium to reinfection and to physicochemical injury, 803

—. See FRANCIS and STUART-HARRIS, 789, 813

SULLIVAN, EUGENE R. See YOFFEY, SULLIVAN, and DRINKER, 941

THOMPSON, R. H. S., and DUBOS, R. J. Production of experimental osteomyelitis in rabbits by intravenous injection of *Staphylococcus aureus*, 191

THORN, GEORGE W., and ENGEL, LEWIS L. The effect of sex hormones on the renal excretion of electrolytes, 299
—, —, and EISENBERG, HARRY. The effect of corticosterone and related compounds on the renal excretion of electrolytes, 161
TISELIUS, ARNE. See SEIBERT, PEDERSEN, and TISELIUS, 413
TRASK, JAMES D. See GERMAN and TRASK, 125
TRAUB, ERICH. Factors influencing the persistence of choriomeningitis virus in the blood of mice after clinical recovery, 229
—. Immunization of guinea pigs against lymphocytic choriomeningitis with formolized tissue vaccines, 95
TREFFERS, HENRY P. See HEIDELBERGER, GRABAR, and TREFFERS, 913

URQUHART, R. W. I. See NICHOLSON, URQUHART, and SELBY, 439

WARNER, E. D. Plasma prothrombin: effect of partial hepatectomy, 831
WARREN, JOEL. See WOGLOM and WARREN, 513
WARREN, MADELEINE F. See SCHULZ, WARREN, and DRINKER, 251
WEBSTER, LESLIE T. Immunity of mice following subcutaneous vaccination with St. Louis encephalitis virus, 111
—. See HODES and WEBSTER, 263
WINTROBE, MAXWELL M., MITCHELL, DAVID M., and KOLB, LAWRENCE C. Sensory neuron degeneration in vitamin deficiency. Degeneration of the posterior columns of the spinal cord, peripheral nerves, and dorsal root ganglion cells in young pigs fed a diet containing thiamin (B_1) and riboflavin but otherwise deficient in vitamin B complex, 207
WOGLOM, WILLIAM H., and WARREN, JOEL. A pyogenic filtrable agent in the albino rat, 513
WOOLPERT, ORAM C., GALLAGHER, FRED W., RUBINSTEIN, LEONA, and HUDSON, N. PAUL. Propagation of the virus of human influenza in the guinea pig fetus, 313

YOFFEY, JOSEPH M., and DRINKER, CECIL K. The lymphatic pathway from the nose and pharynx. The absorption of dyes, 629
—, SULLIVAN, EUGENE R., and DRINKER, CECIL K. The lymphatic pathway from the nose and pharynx. The absorption of certain proteins, 941

INDEX TO SUBJECTS

ABSORPTION, dye, lymphatic pathway from nose and pharynx, 629
—, protein, lymphatic pathway from nose and pharynx, 941
Acid, cellobiuronic, immunology of artificial antigen containing, 469
Air-driven vacuum ultracentrifuge, biological concentration work, 1
Allantois, chorio-, chick embryo, human skin graft, 891
Allergy, tubercular, without infection, 659
Antibodies, papilloma virus-neutralizing and complement-binding, relation, 703
—, protective, of serum, titer, relation to degree of immunity following vaccination with St. Louis encephalitis virus, 263
Antibody, dissociated, reaction with specific polysaccharide, and effect of formaldehyde, 913
— formation and sensitization, with increased resistance to tuberculous infection, induced by heat-killed tubercle bacilli, 273
Antigen, artificial, cellobiuronic acid-containing, immunology, 469
—, complement-binding, in papilloma extracts, relation to papilloma virus, 725
Antigenic structure, mammalian spermatozoa, 335
Antigenicity and pathogenicity, papilloma extracts, 737
Antigens, endo-, brucella, precipitation of heterologous antisera, 83
Antigens, endo-, brucella, precipitation of homologous antisera, 73
Antisera, heterologous, precipitation by brucella endoantigens, 83
—, homologous, precipitation by brucella endoantigens, 73
Antiviral serum constituents following immunization with active or formolized inactive equine encephalomyelitis virus, 779
Arteries, renal, trypsin injection causing renal insufficiency, 485

BACILLUS *tuberculosis*, defatted, and products, cellular reactions, 853
— *tuberculosis*, heat-killed, inducing sensitization and antibody formation with increased resistance to tuberculous infection, 273
Biological concentration work with air-driven vacuum ultracentrifuge, 1
— properties of tuberculin protein and polysaccharide molecules, 413
Blood group A specific substance, isolation from commercial peptone, 221
— and lymphatics, passage of virulent Type III pneumococci from respiratory tract, 251
—, persistence of choriomeningitis virus after clinical recovery, factors influencing, 229
— plasma. *See* Plasma.
Bodies, elementary, of vaccine virus, ultracentrifugation, 583, 607
Brucella precipitin systems, quantitative studies, 73, 83

CARBOHYDRATE - PROTEINS, conjugated, chemoimmunological studies, 469
Carcinogenic effect of papilloma virus on tarred rabbit skin, 529
Carcinoma in leopard frog, probable virus causation, 457
Cattle, human double zone beta hemolytic streptococci in udder, 905
Cellobiuronic acid antigen, artificial, immunology, 469
Cells, ganglion, dorsal root, degeneration on diet containing thiamin (B_1) and riboflavin but otherwise deficient in vitamin B complex, 207
Cellular reactions to defatted tubercle bacilli and products, 853
— reactions to polysaccharides from tubercle bacilli and pneumococci, 563
— reactions to tuberculo-proteins and tuberculo-lipids, 837
Centrifugation, ultra-, vaccine virus elementary bodies, 583, 607
Centrifuge, ultra-, vacuum, air-driven, hormone studies, biological concentration work, 1
Chemical compounds, simple, sensitization of animals, 505
Chemoimmunology, conjugated carbohydrate-proteins, 469
Chorioallantois, chick embryo, human skin graft, 891
Choriomeningitis, lymphocytic, immunization with formolized tissue vaccines, 95
— virus, persistence in blood after clinical recovery, factors influencing, 229
Complement-binding antigen in papilloma extracts, relation to papilloma virus, 725
— and papilloma virus-neutralizing antibodies, relation, 703
Connective tissue. *See* Tissue.
Corticosterone and related compounds, effect on renal excretion of electrolytes, 161
Cytopenia, nutritional, 923

DEFICIENCY, vitamin M, nutritional cytopenia, 923
—, vitamin, sensory neuron degeneration, 207
Degeneration, sensory neuron, in vitamin deficiency, 207
Diazomethane and mustard oil sensitization of animals, 505
Diet containing thiamin (B_1) and riboflavin but otherwise deficient in vitamin B complex, degeneration of posterior columns of spinal cord, peripheral nerves, and dorsal root ganglion cells, 207
Dye absorption, lymphatic pathway from nose and pharynx, 629
—, vital, demonstrating altered cutaneous conditions in tuberculosis, 325
—, vital, spread in connective tissue, normal and pathological factors influencing, 869

ELECTROCHEMICAL properties of tuberculin protein and polysaccharide molecules, 413
Electrolytes, renal excretion, effect of corticosterone and related compounds, 161
—, renal excretion, effect of sex hormones, 299
Embryos, chick, human skin grafted upon chorioallantois, 891
Encephalitis virus, St. Louis, degree of immunity following vaccination, relation to titer of protective serum antibodies, 263
— virus, St. Louis, immunity following subcutaneous vaccination, 111
Encephalomyelitis, equine, Eastern, histopathology of nervous system in guinea pig, 677

Encephalomyelitis, equine, virus, intraperitoneal and intracerebral routes in serum protection tests with, 173,761, 779
Endoantigens, brucella, precipitation of heterologous antisera, 83
—, brucella, precipitation of homologous antisera, 73
Epidemic influenza virus infection in ferret, nasal histology, 789, 803, 813
Epithelium, respiratory, regenerating, resistance to reinfection and physicochemical injury after epidemic influenza virus infection, 803
Excretion, renal, of electrolytes, effect of corticosterone and related compounds, 161
—, renal, of electrolytes, effect of sex hormones, 299

FETUS, guinea pig, propagation of human influenza virus, 313
Filtrable agent, pyogenic, in albino rat, 513
Formaldehyde effect in antibody purification, 913
Formolized inactive equine encephalomyelitis virus, or active virus, antiviral serum constituents following immunization, 779
— tissue vaccines, immunization against lymphocytic choriomeningitis, 95
Frog, leopard, carcinoma probably caused by virus, 457

GANGLION cells, dorsal root, degeneration on diet containing thiamin (B_1) and riboflavin but otherwise deficient in vitamin B complex, 207
Glycerol, sucrose, and urea solutions, influence on vaccine virus, 607
Graft, human skin, upon chick embryo chorioallantois, 891

HEAT-KILLED tubercle bacilli inducing sensitization and antibody formation with increased resistance to tuberculous infection, 273
Hemolytic streptococci, human, double zone beta, in cow's udder, 905
Hepatectomy, partial, effect on plasma prothrombin, 831
Heterologous antisera, precipitation by brucella endoantigens, 83
Histology, nasal, epidemic influenza virus infection in ferret, 789, 803, 813
Histopathology, nervous system in guinea pig with Eastern equine encephalomyelitis, 677
Homologous antisera, precipitation by brucella endoantigens, 73
Hormone studies with ultracentrifuge, 1
Hormones, sex, affecting renal excretion of electrolytes, 299
Horse encephalomyelitis, Eastern, histopathology of nervous system in guinea pig, 677
— encephalomyelitis virus, intraperitoneal and intracerebral routes in serum protection tests with, 173, 761, 779
Human double zone beta hemolytic streptococci in cow's udder, 905
— influenza virus propagated in guinea pig fetus, 313
— skin grafted upon chick embryo chorioallantois, 891
Hypertension and renal insufficiency produced by new method, 693

IMMUNE serum and infective dose of malaria parasites, protection test demonstrating quantitative relationship, 29
— serum potency in chronic *Plasmodium knowlesi* infections, effect of repeated superinfection, 17

Immunity, degree, following vaccination with St. Louis encephalitis virus, relation to titer of protective serum antibodies, 263
— following subcutaneous vaccination with St. Louis encephalitis virus, 111
Immunization, active or formolized inactive equine encephalomyelitis virus, antiviral serum constituents following, 779
— against lymphocytic choriomeningitis with formolized tissue vaccines, 95
Immunological reactions with papilloma virus, 703, 725, 737
Immunology, chemo-, conjugated carbohydrate-proteins, 469
Influenza virus, epidemic, infection in ferret, nasal histology, 789, 803, 813
— virus, human, propagation in guinea pig fetus, 313
Injection, intravenous, of *Staphylococcus aureus*, producing osteomyelitis in rabbits, 191
—, trypsin, into renal arteries, renal insufficiency following, 485
Injections, intraperitoneal and intracerebral, in serum protection tests with equine encephalomyelitis virus, 173, 761, 779
Inoculations, repeated, epidemic influenza virus, histological and serological observations, 813
Insufficiency, renal, following trypsin injection into renal arteries, 485
—, renal, and hypertension, produced by new method, 693

KIDNEY excretion of electrolytes, effect of corticosterone and related compounds, 161
— excretion of electrolytes, effect of sex hormones, 299
— function affected by unilateral kidney lesions, 439
Kidney insufficiency following trypsin injection into renal arteries, 485
— insufficiency and hypertension produced by new method, 693

LIPIDS, tuberculo-, and tuberculoproteins, cellular reactions, 837
Lymph, formation and flow, effect of pulse, 353
Lymphatic pathway from nose and pharynx, 629, 941
Lymphatics and blood, passage of virulent Type III pneumococci from respiratory tract, 251
Lymphocytic choriomeningitis, immunization with formolized tissue vaccines, 95

MALARIA parasites, infective dose and immune serum, protection test demonstrating quantitative relationship, 29
Mammalian spermatozoa, antigenic structure, 335
Meningitis, chorio-, lymphocytic, immunization with formolized tissue vaccines, 95
—, chorio-, virus, persistence in blood after clinical recovery, factors influencing, 229
— and pneumonitis, acute, unidentified virus producing, 147
Methane, diazo-, and mustard oil, sensitization of animals, 505
Molecules, tuberculin protein and polysaccharide, molecular weight, electrochemical and biological properties, 413
Mustard oil and diazomethane sensitization of animals, 505

NEPHROSIS, unilateral, due to sodium tartrate, renal function, 439

Nerves, peripheral, degeneration on diet containing thiamin (B_1) and riboflavin but otherwise deficient in vitamin B complex, 207
Nervous system, histopathology in guinea pig with Eastern equine encephalomyelitis, 677
Neuron, sensory, degeneration in vitamin deficiency, 207
Neurosurgery increasing susceptibility to poliomyelitis, 125
Nose, epidemic influenza virus infection in ferret, histology, 789, 803, 813
—, instillation of vaccinia virus, 401
— and pharynx, lymphatic pathway, 629, 941
—, poliomyelitis virus nasally instilled in normal and convalescent monkeys, host to host transmission, 39
Nutritional cytopenia, 923

OSTEOMYELITIS, production in rabbits by intravenous injection of *Staphylococcus aureus*, 191

PAPILLOMA virus, carcinogenic effect on tarred rabbit skin, 529
— virus, immunological reactions with, 703, 725, 737
Parasites, malaria, infective dose, and immune serum, protection test demonstrating quantitative relationship, 29
Pathogenicity and antigenicity, papilloma extracts, 737
Pathological and normal factors influencing vital dye spread in connective tissue, 869
Peptone, commercial, isolation of blood group A specific substance, 221
Pharynx and nose, lymphatic pathway, 629, 941
Phosphatide, tuberculo-, and tuberculo-protein, reactions of normal and tuberculous animals, 641
Physicochemical injury and reinfection, resistance of regenerating respiratory epithelium, after epidemic influenza virus infection, 803
Plasma prothrombin, partial hepatectomy effect, 831
Plasmodium knowlesi infections, chronic, effect of repeated superinfection upon potency of immune serum, 17
Pneumococcus polysaccharides, cellular reactions, 563
— Type III, virulent, passage from respiratory tract into lymphatics and blood, 251
Pneumonitis and meningitis, acute, unidentified virus producing, 147
Poliomyelitis, cutaneous infectivity, increased susceptibility after neurosurgical procedures, 125
— virus, nasally instilled, in normal and convalescent monkeys, host to host transmission, 39
Polysaccharide molecules, tuberculin, molecular weight, electrochemical and biological properties, 413
—, specific, reaction with dissociated antibody, and effect of formaldehyde, 913
Polysaccharides, tuberculo- and pneumococcus, cellular reactions, 563
Pox viruses, behavior in respiratory tract, 401
Precipitation of heterologous antisera by brucella endoantigens, 83
— of homologous antisera by brucella endoantigens, 73
Precipitin systems, brucella, quantitative studies, 73, 83
Protein absorption, lymphatic pathway from nose and pharynx, 941

Protein molecules, tuberculin, molecular weight, electrochemical and biological properties, 413
—, tuberculo-, and tuberculo-phosphatide, reactions of normal and tuberculous animals, 641
Proteins, carbohydrate-, conjugated, chemoimmunological studies, 469
—, tuberculo-, and tuberculo-lipids, cellular reactions, 837
Prothrombin, plasma, partial hepatectomy effect, 831
Pulse, effect on formation and flow of lymph, 353
—, effect on spread of substances through tissues, 377
Pyogenic filtrable agent in albino rat, 513

RAT, albino, pyogenic filtrable agent, 513
Regenerating respiratory epithelium, resistance to reinfection and physicochemical injury after epidemic influenza virus infection, 803
Renal. *See* Kidney.
Resistance of regenerating respiratory epithelium to reinfection and physicochemical injury, after epidemic influenza virus infection, 803
— to tuberculous infection increased by heat-killed tubercle bacilli, antibody formation and sensitization, 273
Respiratory epithelium, regenerating, resistance to reinfection and physicochemical injury after epidemic influenza virus infection, 803
— tract, behavior of pox viruses, 401
— tract instillation of virulent Type III pneumococci, passage into lymphatics and blood, 251
Riboflavin and thiamin (B_1) in diet otherwise deficient in vitamin B complex, degeneration of posterior columns of spinal cord, peripheral nerves, and dorsal root ganglion cells, 207
Root, dorsal, ganglion cells, degeneration on diet containing thiamin (B_1) and riboflavin but otherwise deficient in vitamin B complex, 207

ST. LOUIS encephalitis virus, degree of immunity following vaccination, relation to titer of protective serum antibodies, 263
— encephalitis virus, immunity following subcutaneous vaccination, 111
Sensitization and antibody formation, with increased resistance to tuberculous infection, induced by heat-killed tubercle bacilli, 273
— of animals with simple chemical compounds, 505
Sensory neuron degeneration in vitamin deficiency, 207
Serology, repeated inoculations of epidemic influenza virus, 813
Serum, antiviral constituents, after immunization with active or formolized inactive equine encephalomyelitis virus, 779
—, immune, and infective dose of malaria parasites, protection test demonstrating quantitative relationship, 29
—, immune, potency, in chronic *Plasmodium knowlesi* infections, effect of repeated superinfection, 17
— protection tests with equine encephalomyelitis virus, intraperitoneal and intracerebral routes, 173, 761, 779
—, protective antibodies, titer, relation to degree of immunity following vaccination with St. Louis encephalitis virus, 263

Sex hormones affecting renal excretion of electrolytes, 299
Skin, human, grafted upon chick embryo chorioallantois, 891
— infectivity in poliomyelitis, increased susceptibility after neurosurgical procedures, 125
—, tarred, rabbit, carcinogenic effect of papilloma virus, 529
—, tuberculosis, altered conditions demonstrated with vital dye, 325
Sodium tartrate producing unilateral nephrosis, renal function, 439
Specific polysaccharide, reaction with dissociated antibody, and effect of formaldehyde, 913
— substance, blood group A, isolation from commercial peptone, 221
Spermatozoa, mammalian, antigenic structure, 335
Spinal cord, degeneration of posterior columns on diet containing thiamin (B_1) and riboflavin but otherwise deficient in vitamin B complex, 207
Staining, vital, connective tissues, 63
—, vital, demonstrating altered cutaneous conditions in tuberculosis, 325
—, vital, spread in connective tissue, normal and pathological factors influencing, 869
Staphylococcus aureus, intravenous injection, producing osteomyelitis in rabbits, 191
Streptococci, hemolytic, human, double zone beta, in cow's udder, 905
Sucrose, glycerol, and urea solutions, influence on vaccine virus, 607
Susceptibility, poliomyelitis, increased after neurosurgical procedures, 125
TARRED skin, rabbit, carcinogenic effect of papilloma virus, 529
Thiamin (B_1) and riboflavin in diet otherwise deficient in vitamin B complex, degeneration of posterior columns of spinal cord, peripheral nerves, and dorsal root ganglion cells, 207
Tissue, connective, spread of vital dye influenced by normal and pathological factors, 869
—, connective, vital staining, 63
—, spread of substances through, effect of pulse, 377
— vaccines, formolized, immunization against lymphocytic choriomeningitis, 95
Titer of protective serum antibodies, relation to degree of immunity following vaccination with St. Louis encephalitis virus, 263
Transmission, host to host, nasally instilled poliomyelitis virus in normal and convalescent monkeys, 39
Trypsin injection into renal arteries, renal insufficiency following, 485
Tubercle bacilli, defatted, and products, cellular reactions, 853
— bacilli, heat-killed, inducing sensitization and antibody formation with increased resistance to tuberculous infection, 273
Tubercular allergy without infection, 659
Tuberculin protein and polysaccharide molecules, molecular weight, electrochemical and biological properties, 413
Tuberculo-lipids and tuberculo-proteins, cellular reactions, 837
Tuberculo-phosphatide and tuberculo-protein, reactions of normal and tuberculous animals, 641
Tuberculo-polysaccharides, cellular reactions, 563

Tuberculo-protein and tuberculo-phosphatide, reactions of normal and tuberculous animals, 641
Tuberculo-proteins and tuberculo-lipids, cellular reactions, 837
Tuberculosis, altered cutaneous conditions demonstrated with vital dye, 325
Tuberculous infection, resistance increased by heat-killed tubercle bacilli, antibody formation and sensitization, 273
— and normal animals, reactions to tuberculo-protein and tuberculo-phosphatide, 641

UDDER, cow, human double zone beta hemolytic streptococci, 905
Ultracentrifugation, vaccine virus elementary bodies, 583, 607
Ultracentrifuge, vacuum, air-driven, hormone studies, biological concentration work, 1
Urea, sucrose, and glycerol solutions, influence on vaccine virus, 607

VACCINATION, subcutaneous, with St. Louis encephalitis virus, immunity following, 111
- with St. Louis encephalitis virus, degree of immunity following, relation to titer of protective serum antibodies, 263
Vaccine virus elementary bodies, ultracentrifugation, 583, 607
Vaccines, tissue, formolized, immunization against lymphocytic choriomeningitis, 95
Vaccinia virus, nasal instillation, 401
Virulent Type III pneumococci, passage from respiratory tract into lymphatics and blood, 251
Virus, choriomeningitis, persistence in blood after clinical recovery, factors influencing, 229
Virus, encephalitis, St. Louis, degree of immunity following vaccination, relation to titer of protective serum antibodies, 263
—, encephalitis, St. Louis, immunity following subcutaneous vaccination, 111
—, equine encephalomyelitis, intraperitoneal and intracerebral routes in serum protection tests with, 173, 761, 779
—, influenza, epidemic, infection in ferret, nasal histology, 789, 803, 813
—, influenza, human, propagation in guinea pig fetus, 313
—, papilloma, carcinogenic effect on tarred rabbit skin, 529
—, papilloma, immunological reactions with, 703, 725, 737
—, poliomyelitis, nasally instilled, in normal and convalescent monkeys, host to host transmission, 39
—, probable causation of carcinoma in leopard frog, 457
—, unidentified, producing acute meningitis and pneumonitis, 147
—, vaccine, elementary bodies, ultracentrifugation, 583, 607
—, vaccinia, nasal instillation, 401
Viruses, pox, behavior in respiratory tract, 401
Vital dye demonstrating altered cutaneous conditions in tuberculosis, 325
— dye spread in connective tissue, normal and pathological factors influencing, 869
— staining of connective tissues, 63
Vitamin deficiency, sensory neuron degeneration, 207
— M deficiency, nutritional cytopenia, 923